Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for producing a polymer optical waveguide comprising the steps of:

(1) preparing a template that is made of a template forming curable resin and has a concave portion corresponding to an optical waveguide core convex ~~portion;~~ portion, and that is provided with through holes that communicate, respectively, with one end and the other end of the concave portion and which are, respectively, an inlet and an outlet for filling or exchanging a core forming curable resin of the concave portion;

(2) applying an ozone treatment or irradiating light having a wavelength of 300 nm or less to at least one of a surface of the template having the concave portion and a core formation surface of a cladding film substrate;

(3) bringing the cladding film substrate into close contact with the ~~template;~~ template without using an adhesive;

(4) filling in the ~~a~~ core forming curable resin into the concave portion of the template ~~with which the cladding film substrate is in close contact;~~ by applying suction from the through hole that is the outlet of the concave portion;

(5) curing the filled core forming curable resin to form a core;

(6) removing the template from the cladding film substrate; and

(7) forming a cladding layer on the cladding film substrate on which the core has been formed.

2. (Original) The method of claim 1, wherein the light having a wavelength of 300 nm or less is irradiated by an excimer radiation source.

3. (Original) The method of claim 2, wherein the excimer radiation source is a dielectric barrier discharge excimer radiation source having a central emission wavelength of 172 nm.

4. (Original) The method of claim 1, wherein the template forming curable resin is liquid silicone rubber.

5. (Original) The method of claim 4, wherein the liquid silicone rubber is liquid dimethyl siloxane rubber.

6. (Original) The method of claim 1, wherein the core forming curable resin is an acrylic UV curable resin.

7. (Original) The method of claim 1, wherein the core forming curable resin is an epoxy UV curable resin.

8. (Original) The method of claim 1, wherein a refractive index of the cladding film substrate is 1.55 or less.

9. (Original) The method of claim 1, wherein the cladding film substrate is an alicyclic acrylic resin film.

10. (Original) The method of claim 1, wherein the cladding film substrate is an alicyclic olefinic resin film.

11. (Original) The method of claim 10, wherein the alicyclic olefinic resin film is a resin film having a norbornene structure on a main chain and a polar group on a side chain.

12. (Original) The method of claim 1, wherein a surface energy of the template is in a range of 10 to 30 dyn/cm.

13. (Original) The method of claim 1, wherein a Share rubber hardness of the template is in a range of 15 to 80.

14. (Original) The method of claim 1, wherein a surface roughness of the template is 0.2 μm or less.

15. (Original) The method of claim 1, wherein the template is light transmissive in at least one of a UV region and a visible region.

16. (Original) The method of claim 1, wherein a volume change when the core forming curable resin is cured is 10% or less.

17. (Original) The method of claim 1, wherein difference between a refractive index of the cladding film substrate and that of the cladding layer is 0.05 or less.

18. (Original) The method of claim 1, wherein a refractive index of the core is 1.50 or greater.

19. (Currently Amended) A method for producing a polymer optical waveguide comprising the steps of:

(1) preparing a template that is made of a template forming curable resin and has a concave portion corresponding to an optical waveguide core convex ~~portion;~~ portion, and that is provided with through holes that communicate, respectively, with one end and the other end of the concave portion and which are, respectively, an inlet and an outlet for filling or exchanging a core forming curable resin of the concave portion;

(2) applying an ozone treatment or irradiating light having a wavelength of 300 nm or less to at least one of a surface of the template having the concave portion and a core formation surface of a cladding film substrate;

(3) bringing the cladding film substrate into close contact with the ~~template;~~ template without using an adhesive;

(4) filling in the ~~a~~ core forming curable resin into the concave portion of the template ~~with which the cladding film substrate is in close contact;~~ by applying suction from the through hole that is the outlet of the concave portion; and

(5) curing the filled core forming curable resin to form a core,

wherein the template is light transmissive, and a difference between a

refractive index of the template and that of the core is 0.01 or more.